

MEMORANDUM

DATE:	May 16 th , 2016
FROM:	Eric Lancaster
SUBJECT:	Weekly Progress Report @ Gold King
TO:	Steven Way

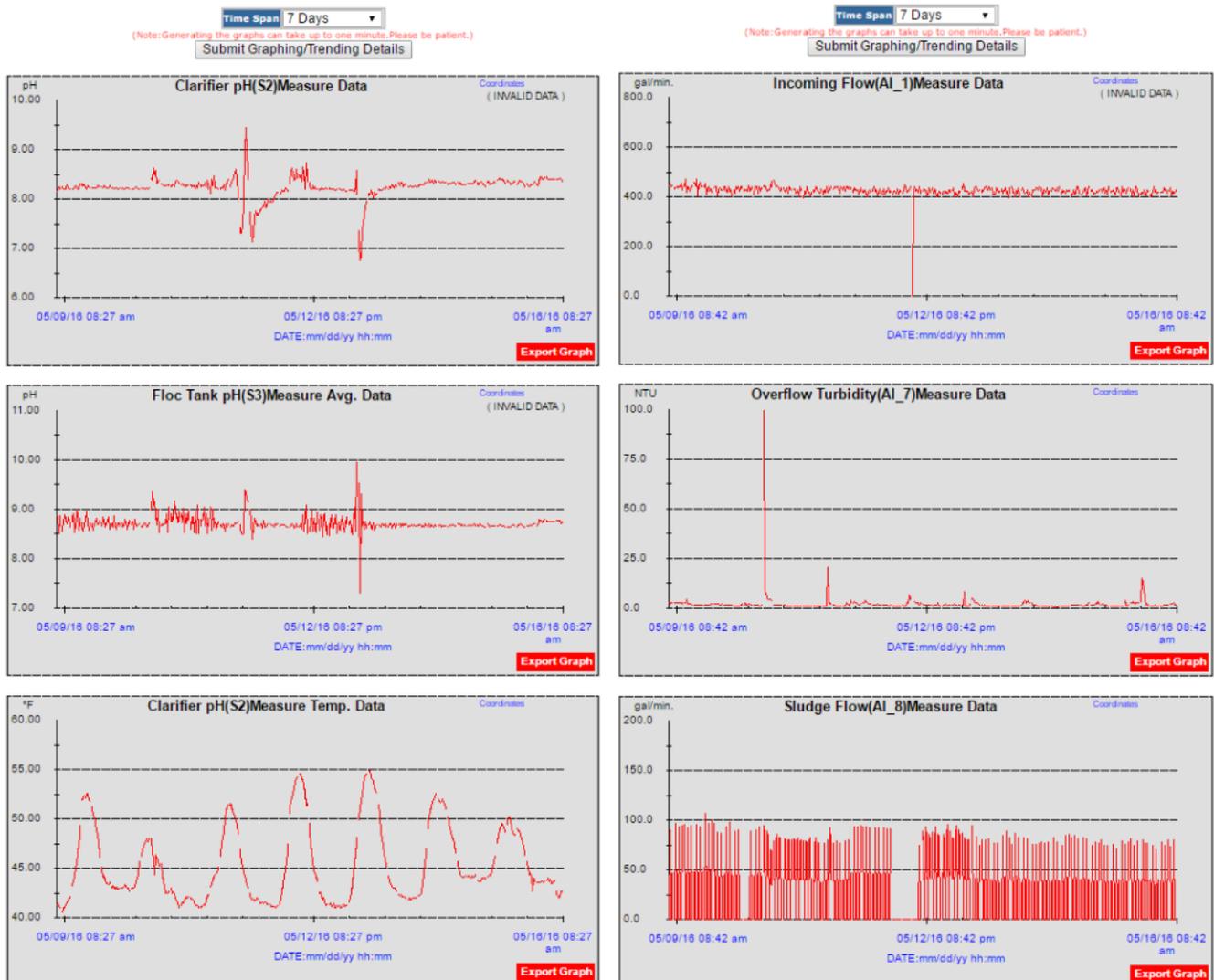
Project: Gold King Interim Water Treatment Plant (IWTP)
Location: Gladstone, Colorado
Prepared for: Emergency Response Unit – US EPA Region 8

Reporting Period: May 9 – May 16
Report No.: 21

I. General Operations Summary:

IWTS Function/Upsets

- The following graphs provide trending information during the previous 7 days. The dataloggers collect control information from the Lime Circuit (left) and Flow Circuit (right) Programmable Logic Controllers (PLCs) at the Gold King IWTP. Over the reporting period (5/9/16 – 5/16/16 inclusive) Alexco treated 4.57 million gallons at an average flow rate of 454 gpm with all discharged treated water leaving the 12" HDPE pipeline.



- Please note: Several days each week, the Alexco operators check the pH at both the flocculation tank and clarifier discharge. During this time, the probe is placed in vinegar (acid), and three pH buffers – 4, 7, and 10. While the probe is in the acid/buffer, the datalogger may capture one of those points for tracking purposes, which explains the occasional pH spikes seen on the graph.
- On 5/11 and 5/13, the IWTP experienced high TSS spikes from the upper ponds, which caused some fluctuation of the pH at the clarifier as the peristaltic pumps both over and under shot lime addition.
- On 5/12, the Alexco operator briefly closed the incoming butterfly valves.
- Instantaneous spikes of the Overflow Turbidity Meter are associated with routine cleaning. However, a longer TSS spike on 5/15 is due again to a high TSS spike from the upper pond, potentially caused by storm conditions.

Communication System Function Status

- No issues – reliable operations during the reporting period.

Facility or System Related Work, including Repairs & Completions

- **Electrical Upgrades** – Alexco's selected electrical contractor (Rapid Energy) began electrical upgrades on Friday, April 15th. These upgrades passed final inspection from the State Inspector on Wednesday, May 11th (see Photo 4).
- **Linkan Engineering** – Completed two weeks of test work on the incoming mine water as well as the discharged sludge from the clarifier and within the textile bags.
- **MobileMini** – The MobileMini is located to the left of the IWTP and now connected to grid power.
- **IT Support** - On Thursday, May 12, EPA installed a 1.4m satellite on the MobileMini Office Trailer. This system currently provides up-link capabilities for a VOIP phone installed within the IWTP. The satellite technician also identified issues with the current Alexco HughesNet system and improved reliability.
- **Second Clarifier** – Alexco has installed and operated a 2nd clarifier (rental) and supporting infrastructure that may be required for spring melt. The system was tested and became operational on Sunday, May 8th.
- **Additional Bag Installation** - Alexco installed a 90' x 45' bag within Cell D on May 10th, and connected that bag to the discharge from the clarifier.

II. Identified Problems, Causes, and Solutions (Planned or Implemented)

- **Spring Melt Contingency Updates:**
 - **Additional Bags** – Alexco has additional textile bags (two 125' x 45 and six 45' x 22.5') located at site that can be installed and connected to the sludge manifold as needed.
 - **Sludge Removal from Upper Ponds** – Alexco plans to work with ER to develop a plan to remove solids from the Upper Ponds within the next few weeks.

III. System Inspections – Specific elements inspected and finding

- N/A

IV. Site Status

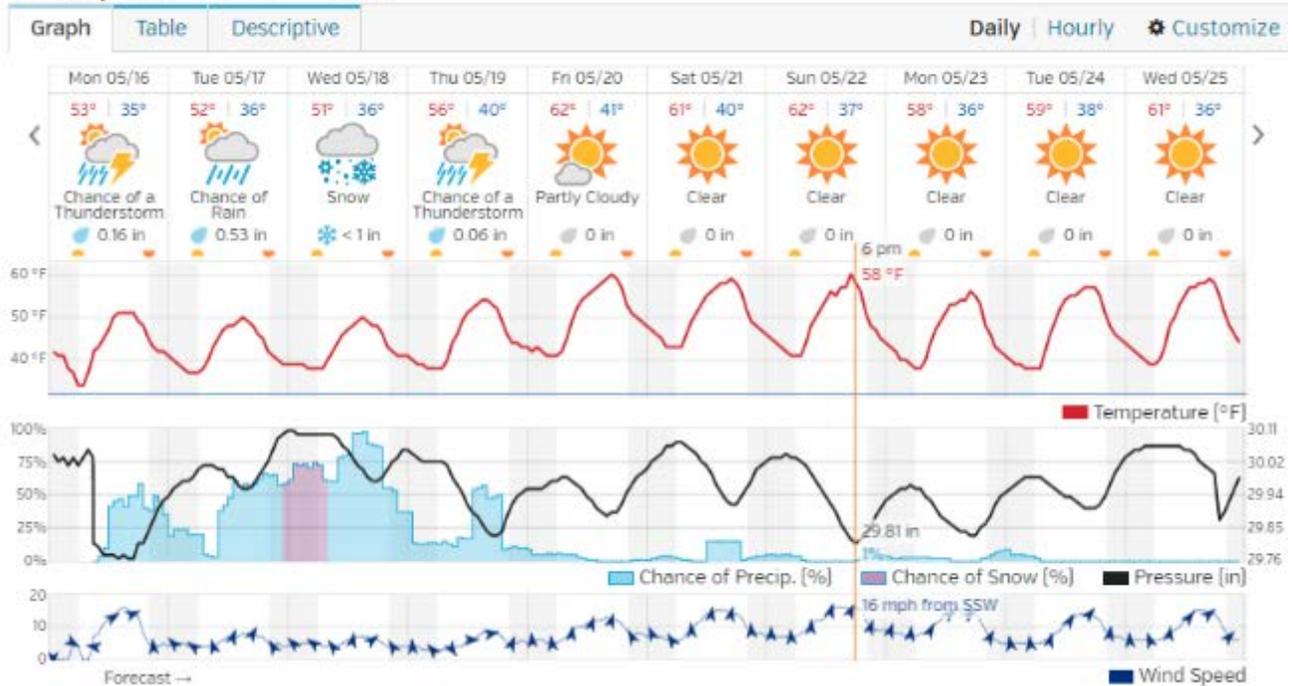
Personnel and equipment onsite

- Alexco currently employs one full-time employee (FTE) who lives in Silverton and oversees all operations at the Gold King IWTP. He is supported by remote operators in Denver, and local sub-contractors as needed.

Weather conditions

- Weather Underground Report for Silverton, CO (5/16/2016 – 5/25/2016)

10-Day Weather Forecast



Site Images



Photo 1: Site from the road near the IWTP discharge pipe – Taken on 5/12/2016



Photo 2: View of IWTP from the Upper Road – Taken on 4/12/2016



Photo 5: 2nd Clarifier, discharge line near IWTP – Taken on 4/10/2016



Photo 6: Incoming line from the Reactor Tank – Taken on 4/10/2016